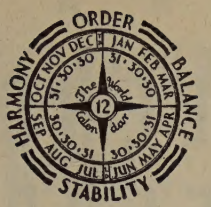

A NEW CALENDAR FOR A NEW WORLD

VOL. XV SECOND QUARTER, 1945 No. 2

V-E DAY, the longed-for day, has come and has brought to the United Nations the end of the destructive war in Europe. It is confidently hoped that this glorious event will hasten the coming of V-J Day, proclaiming the end of the equally calamitous war with Japan, still raging in the Pacific and Asia in all its fanatical fury.

Thus V-E Day is but the end of one vast struggle; the other, V-J Day, must still be won; while still another, equally vast and difficult to cope with—the period of reconstructive days—lies before us.

Victory was won because of the unity of purpose, coordination and cooperation that existed among the joint armed forces of the United Nations. They realized that only in unity is strength, that only with willing cooperation of effort, talent and material, of officers and men, could the war be won. Without these, the war could have been lost, or dragged on through years, which would have sapped the resources and strength of both victor and vanquished.

The same willing cooperation and mutual agreement through sacrifice, taking and giving, must prevail among the victorious United Nations to win and preserve the peace. They dare not forfeit the priceless quality of unity and cooperation. Constructive movements, causes and ideas that strengthen and encourage this unity of thought and cooperative action should be grasped, accepted and adopted.

Among such movements is The World Calendar, the plan and purpose of which have the same desirable qualities as were exemplified in the winning of the war. Therefore, it logically belongs and will be a valuable adjunct in all international conferences dealing with economics, trade, labor, cultural conditions, boundaries and geography, international relations and affairs of state, as well as the everyday needs of every man and woman, whether in business or at home.

We dare not reject the constructive World Calendar.

JOURNAL OF

CALENDAR REFORM

April, May, June
1945

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Published by THE WORLD CALENDAR ASSOCIATION, INC.
INTERNATIONAL BUILDING: 630 FIFTH AVE., N. Y. C. 20

FAST RAILWAY FREIGHT OPERATION DEMANDS USE OF WORLD CALENDAR

By Edward F. Flynn

In the last issue of the* Journal of Calendar Reform *Edward F. Flynn, Assistant to the Vice President and General Counsel, Great Northern Railway Company, Saint Paul, Minnesota, quoted statements of prominent railway officials regarding the future of railway passenger service in the United States and gave his views on the need for the adoption of The World Calendar. In this concluding article he explores the future of freight operation.

IN our new world of increasing transportation competition, the present calendar is as much out of place in railway operation as a 1900 engine would be on a 1950 streamline train. The use of the present calendar by railways in 1950 would be about the same as trying to operate a fast train with the brakes applied.

While most of us may know more about passenger trains and passenger service than freight trains and freight service, we must not overlook the fact that gross operating revenues from railway *passenger* business in 1944 were $1,790,305,000, while from *freight* traffic they were nearly four times as great, or $6,997,382,000.

It is important, therefore, to know what some of the country's railway executives think of future railway freight service, and for us to consider how this branch of the railroad service will be helped by a better calendar than the one in use today.

What is the railway executives' idea of the postwar freight train that will soon carry your freight from city to city or coast to coast, and the motive power that will speed up the delivery of that freight faster than ever before? Let us consult a recent survey of these matters made by *Railway Age* to ascertain opinions of these high railway officials regarding future railway freight service.

The consensus of more than 50 top railway officials is that, through

rehabilitated track facilities, lighter and better freight trains and new and faster motive power, the railways will be able to meet successfully all competition. To do this they will provide a service both pleasing and satisfactory to their customers. Some railway officials believe that, through even more efficient operation than at present, they may lower freight rates.

For instance, a president of a midwestern line states: "By applying our present knowledge to postwar operations, I look for revolutionary developments in higher freight train speeds and lighter weight freight cars."

"The freight car of the future, when so many high-speed freight trains are planned, will have to be able to stand up under passenger-train speeds and should possibly be lightweight. We shall certainly need more special service or specially equipped cars," is the statement of the vice president of traffic of a midwestern line.

And a vice president of traffic of a southwestern railway is of the opinion that "the lightweight freight car is coming just as surely as the lightweight passenger car and this will be a highly economical move."

Anticipating the demands of postwar freight transportation, the railway with which I am associated made a great forward move in improved freight service when it had built and put in use, a few months ago, America's first aluminum box car. On 2 April, 1945, this aluminum box car completed 125 days of exhaustive service, of which 105 days were on fast passenger trains between Chicago, the Twin Cities and the West Coast. Its total mileage during the period mentioned was 54,000. The car was used to carry special express. Inspection of this newest experimental freight car, after such 125 days' service, showed "condition perfect." This is proof positive that the prediction of the two railway officials last quoted has already come true.

"We have set up arrangements for the operation of overnight (freight) trains between large cities within 500 miles of each other," is the bold statement of the president of a midwestern line.

And still another high railway official asserts that on his railway "We visualize, say, second sections of the streamliners, which will handle the bulk of the baggage, all of the express, and, in addition, cars of 'less than carload merchandise' destined to distribution points for handling from there to local stations by truck. Such trains will necessarily consist of lightweight freight equipment, supplied with all specialties for high-speed service."

The opinion of these officials is that the airplane will not for a long time, if ever, carry any considerable amount of the freight now hauled by the railways. It is only natural to arrive at this conclusion since airplane

companies estimate, according to an article which appeared a few months ago in a national magazine (*Saturday Evening Post*) that their lowest average charge for a ton of freight will be not less than 15 cents a ton mile. The railways' average revenue for a ton mile in 1944 was .0949 cents, or about one-sixteenth of the estimated future airplane freight rate. Since the planes now charge about 65 cents for hauling a ton of freight one mile, it can be seen that the position taken by these railway officials is sound.

"However, the peak in the railroad's gross income is not necessarily a guarantee of a like increase in their net profit. Experience in 1944 demonstrated that the railroad industry must of necessity be numbered among those in which gross revenues accompanied by greatly increased operating efficiency are no guarantee that the individual companies can achieve record levels in net income."

In making this point, Fred B. Stauffer, writing in the financial section of the *New York Herald Tribune* a few months ago, said: "Illustrating this point to a marked degree are figures for Lehigh Valley Railroad, a medium sized Eastern carrier, which can be considered more or less typical of 1943 trends. In August, 1943, gross revenues of $8,320,027 were only 1.0 per cent under the road's best month in history, reached in October, 1920. But this near approach to record gross was able to produce net income of only $524,636, a decline of 69 per cent from the 1920 month."

In connection with the difference in gross revenues between August, 1943, and October, 1920, it is of value to consider the calendrical variations within these two mentioned months. They both had 31 days; whereas October, 1920, had five Fridays, Saturdays and Sundays (a so-called long week-end), August, 1943, had five Sundays, Mondays and Tuesdays. For economic purposes August should have been the better month of the two, but the higher tax rate in all probability swallowed up this advantage.

The average annual compensation of railway employees today is over 50 per cent higher than it was in 1921. Then, too, the tax collector becomes a factor in the decreased net, having taken $1,845,000,000 from us for all sorts of taxes in 1944, as compared to $275,875,000 in 1921, an increase of over 570 per cent. The tax collector is aided and abetted by other factors outside the realm of actual railroad operation. Under the pressure of tax increases and the loss of dividends, the more efficient and improved operating results in 1944 were more than nullified in the net income account of the railroads of America. To lessen somewhat such nullification and to permit a greater degree of accurate analysis and planning, a stabilized, ordered and streamlined calendar would be a decided asset.

If the objectives in freight transportation—lower rates, shorter sched-

ules, and adequate return on investments—are to be achieved, the railroads must operate with even greater efficiency than they are operating at this time. There seems to be no chance for many years to come, in the opinion of the majority of financial men, that corporate taxes will be lowered. Nor will labor costs be decreased. Consequently, faced with passenger competition in the air, by bus and private car, and also faced with competition for freight haulage by trucks and waterways, the American postwar railroad is planning even now to cut corners. The savings in no instance will be great, but the accumulative volume will help lessen the load to be carried and permit capital to be diverted toward avenues that promise better service and consequently greater business volume.

In this necessity of cutting corners in order to save, a better knowledge of month-to-month and quarter-year costs and expenses would be of inestimable help. In our present shifting calendar, wherein everything changes from year to year, the inevitable guesswork that this brings is costly. In the comparable World Calendar, wherein everything agrees and which is ordered and consistent, the obvious certainty of such time-reckoning would be an incalculable saving.

The railways will procure new, faster and more powerful engines as soon as the war ends. Diesel engines are now revolutionizing both freight and passenger service and who knows but that, in a few years, steam turbine and gas turbine engines will supplement, if not supplant, all other forms of motive power.

I can see the day when long distance or so-called "through" freight trains will be streamlined and will run on schedules as fast as passenger trains. Freight trains as well as passenger trains will have so-called "inductive" systems of train communication, making for speed and safety. Through-freights may soon have cushion coupler carrier and positioning devices or other similar equipment, to make it as safe for live stock and merchandise to travel at averages of a mile a minute or more, as it now is for passengers.

As I note the carloading reports for January, 1944, I find there were five "car loading" weeks in January of last year, yet during the past decade there were but four "car loading" weeks in the January of several years. Sometimes part of the month of January is taken for these reports by the last week in December and sometimes by the first week in February, or by both. Imagine the confusion and lack of orderliness caused by such a defective calendar that hops and skips around as it pleases, to the detriment of the railways. This is especially true in the situation last mentioned when for operating or accounting reasons it is sought to make comparisons of railway operations or earnings of previous years or periods.

One could mention many other examples of confusing conditions caused by the uncertainties of the present calendar, all of which can be avoided by the adoption of the permanent, orderly World Calendar. It seems only a natural conclusion that The World Calendar—sound, simple and sensible—should meet with the *universal approval* of all railway executives.

In urging the universal approval and endorsement of The World Calendar by all railway executives and railroad organizations, I am but following their outstanding and brilliant action of 1883-4. In that year the American Railway Association, in cooperation with the Canadian railways, initiated and adopted Standard Time. This action met with outstanding success and was approved by the vast majority of citizens, and it became henceforth the nation-wide time-system of America; even though Congressional approval was not given Standard Time until many years later—in 1918.

A notable and auspicious occasion is here for another action, similar to the one just cited, to be taken by railroad executives and organizations throughout the country. For them to endorse The World Calendar and to use it in their internal accounting system—on the quarterly periods of 13 weeks—would be a practical beginning for its general adoption on Sunday, 1 January, 1950. Such endorsements would impress the government so that it would take action.

There still may be some people who prefer the former proposal for a 13-month calendar. This, however, would seriously complicate railway operation on line and in the offices, and is not worthy of consideration. Under the 13-month calendar plan only the first 28 days of the year would remain the same as at present; from then on, all comparisons between the 13-month calendar and the old calendar would be impossible and tend to serious disorder and confusion. In addition, the extra month, Sol, the new seventh month in this proposed calendar, would result in additional complications, from which the railways could never extricate themselves.

The same criticism is true of calendars that suggest the elimination of the months and the use of the weeks only, plans which advocate long and short months of five weeks of 35 days and four weeks of 28 days, and plans that propose more than one or two intercalary days in a calendar year. For the information of my readers, all these mentioned plans were eliminated by the League of Nations, either in 1931 or in 1937.*

The railways have proved their metal in this war, and with continued public support and efficient and forward looking management they will continue for a long, long time, if not always, to be the mainstay and backbone of America's great transportation system.

**Journal of Calendar Reform*, Vol. 14, pp. 163-166.

RADIO NEEDS A SYMMETRICAL CALENDAR

By Ralph J. Berkson

Having been engaged in Marketing Research and financial analysis for a number of years, Mr. Berkson's association with advertising agencies and the financial sections of newspapers gives him a clear picture of the force of advertising, whether the medium is the radio or the printed page.

THERE is perhaps no area of commercial endeavor in which adoption of the perpetual World Calendar would yield greater benefits than the radio broadcasting industry. The magnitude of this industry can be grasped quickly by noting the fact that the total bill of all program sponsors for time and talent amounted to approximately $400,000,000* in 1944.

The basic unit in all radio programming is the seven-day week. The vast audience, numbering 35,000,000 listeners, by no means constitutes the sum total of all radio listeners. It is merely an approximation of the greatest number of people found listening to their radios during any single quarter-hour period throughout the day. When audience turnover is taken into account the total of all radio listeners, who tune in at one time or another, mounts to 80,000,000 or more.

This is a sizable percentage of America's total population and becomes an even more striking figure when we eliminate from the potential audience those who for one reason or another cannot make use of the radio—a certain number of the infirm and the institutionalized, and all children too young to listen.

Competent research organizations have demonstrated conclusively that the listening habits of the American radio public form a pattern of remarkable consistency. Despite the many differences in the daily routine, which separate rural and urban dwellers, farmers and factory workers, housewives and business people, there is nevertheless a tendency in all of us to conform to certain weekly habits of living.

Consequently, sponsors of radio programs and radio stations, which

**Printers' Ink*, March 16, 1945.

provide the facilities for broadcasting, long since displayed astute showmanship in scheduling individual attractions for Sundays or Mondays or Tuesdays in each week, instead of, let us say, the first, eighth, and fifteenth days, and so on, of each month. Dates, such as 9 April, 17 September or 27 January, for example, are merely cold, impersonal numbers. There is a marked contrast, however, in the names of the individual days. Sunday, Tuesday, Friday—these are three of the seven episodes we pass through each and every week of our entire lives. All seven of them have, in a sense, become personalized through the countless, though indeed diverse, associations they hold for us, repeating with never erring regularity.

Radio contracts for air time are written for 13 consecutive weeks of broadcasting. This 13-week span has come to be known as a single broadcasting cycle; the 13 weeks was adopted as the most practical minimum duration since it is the closest approximation to one-quarter of the year, expressed in weeks.

One might say that the radio broadcasting industry, after assessing the practicalities of the matter, decided to embrace, insofar as possible, the ultimate aim of The World Calendar Association. For here is a classic example, in which a giant industry has proclaimed the sheer common sense of formulating a business year on the basis of four equal quarters, each one of which, it goes without saying, has the same number of Sundays, Mondays, Tuesdays, Wednesdays, Thursdays, Fridays and Saturdays. There are exactly 91 days in 13 weeks. Four such 13-week quarters make up a business year of 364 days, according to this reckoning.

This little old world of ours isn't quite fast enough, however, to spin its orbit around the sun in 364 days, a fact we can perhaps be plenty glad about, because it means our Biblical heritage of alloted time on earth is thereby stretched to include at least 87 days which might not otherwise be ours to enjoy, the accumulation over a 70-year span, alone, of 1¼ days per year. But, since our planet requires approximately 365¼ days in which to complete its celestial swing, we have fallen back on the unimaginative device of capriciously sprinkling 365 days over 12 months and then tossing in one extra day every fourth year so as to give the earth time to catch up with us. For no very good reason we tag the extra day onto the end of February, thereby distorting further the already unbalanced Gregorian calendar. It may make good poetry but it makes very poor business sense.

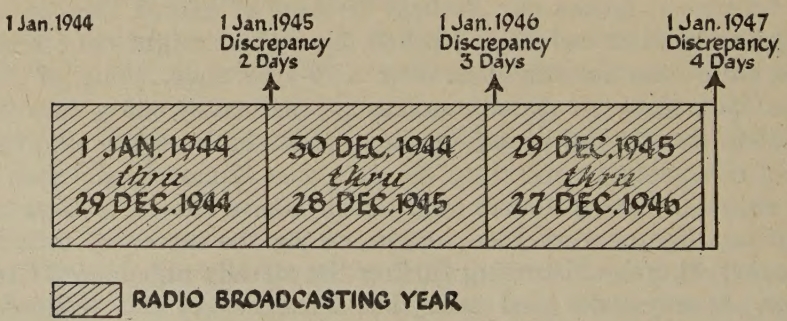
The result in radio, to mention only one specific instance, is that each broadcasting year of four 13-week cycles is not quite ample to fill the calendar year. The ullage of one day in normal years and two days in leap years represents the difference between a simple method of keeping

accounts and evaluating costs, and one which is hampered by the necessity of making allocations for the extra days.

In 1944, $285,100,000 was expended for advertising time cost alone by companies employing radio programs as vehicles to advertise their products or services. The year-to-year business operations of these concerns are inescapably harnessed either to the calendar year or to a fiscal year of their own designation. Whichever they choose, however, the actual duration of elapsed time remains at 365 days. We can't accelerate the earth's revolution about the sun, nor can we divide 365 into four equal integers. Since the 365th day is irrevocably here to stay, why not lift it out of context, so to speak, and call it what in effect it is, Year-End Day? And why not accomplish the same end in leap years by inserting the extra day between 30 June and 1 July and calling it quite accurately Leap-Year Day, thereby allotting the same number of days to February in every year? Both extra days would be World Holidays and the radio sponsors, who would under the Gregorian calendar have 53 broadcasts in a given year, might with The World Calendar as an accepted convention be given an option to purchase radio time on the World Holiday in his 52-week year for broadcasting a special program dedicated to the ideals of peace and world security.

This is what The World Calendar proposes to do in terms of radio broadcasting. The change envisioned thereby is so simple—yet so intelligent—that many of us may be slow to appreciate the value of its contribution in smoothing out the present conflict between days and dates.

Here, for example, is a visual representation of the conflict in the realm of radio broadcasting.



Thus, in three years a discrepancy of four full days has accumulated between what we may call radio-broadcasting years and calendar years. Were this comparison to be charted for the three years, 1946 through 1948,

the discrepancy would amount to five days because of the intervention of 29 February, 1948. Meanwhile, companies that sponsor radio entertainment must find ways of reckoning with the time variable.

Companies' earnings are almost always calculated by calendar quarters. Sales figures are compiled for like periods. Pay rolls are, in many cases, semi-monthly. Advertising budgets are inevitably tied to an estimate of business returns for a calendar or a fiscal year. Yet there is no conceivable formula under our present calendar for effecting a coincidence between the radio advertising expenditures of a given sponsor, which may run as high as $1,500,000 for a half-hour program throughout a single broadcasting year, and the sales revenues which occur in the same period of time and which make possible the series of broadcasts.

What has already been said concerning the sponsor applies with equal force to the radio station or the network. Air contracts are written for four 13-week cycles, totaling 364 days, or what we have termed a radio-broadcasting year; yet earnings are derived from this number of days plus one or two days in the ensuing radio-broadcasting year, though still the same calendar year.

The confusion is further enhanced when we consider that in every calendar year one of the seven days of the week must occur 53 times; in leap years two of the seven days must put in that many appearances. Thus, in 1948 the Gregorian calendar will contain 53 Thursdays and 53 Fridays. Translated into dollars, this means that the gross billing of all radio outlets will be arbitrarily and disproportionately augmented by approximately $1,500,000 in the case of all Thursday and Friday programming, as compared with the other five days of the week.

It goes without saying that this sum will have to be absorbed in the same year by those sponsors whose radio shows happen to fall on these two days of the week. And this is only a part of the trouble from the sponsor's viewpoint, for the figures quoted represent only the cost of radio time. Thursday and Friday radio talent will also have to be paid 53 times. The cost of 53 weeks of radio broadcasting should be allocated to a like number of weeks of business operation in any sound method of allocating costs. So here again arises the necessity of pro-rating costs, another headache for general executives, sales managers, advertising managers, comptrollers, and accountants.

Allow me to express my belief that The World Calendar would be a blessing to the radio broadcasting industry. There is perhaps no other competitive commercial arena in which events move with such dazzling speed or amid such rapidly changing circumstances as the huge auditorium of the air. To know that the broadcast cycle can be made to coincide

with each quarter of the year; that any day of the week selected for broadcasting would occur *exactly 52 times every year;* that the days and the dates in every month can be brought together in a permanently fixed relationship; that the number of Sundays and weekdays can be so apportioned as to remain constant from quarter to quarter and year to year; that the effort to equate the cost of time with the lapse of time need not be frustrated by the whimsicalities of the Gregorian calendar—to know these things would be a practical aid of considerable substance in a field which abounds in variables.

Radio analyst, time buyer, station or network salesmen; sponsors, networks, individual radio stations, and advertising agencies; script writers, producers, and radio performers; in short, all who in one way or another sail the ether waves should be grateful for the appearance of at least one steady object to which they can fasten their moorings. The radio broadcasting industry in its entirety would do well to lend its sponsorship to the perpetual World Calendar with its equal-quarter divisions and the regular World Holidays—the Year-End Day, that absorbs the 365th day every year, and the other regular World Holiday, the Leap-Year Day, that comes in midyear in every leap year—days, as I have already mentioned, dedicated to the ideals of peace and world security.

CHANGE OF DATING

BEGINNING with 1 June 1945, The World Calendar Association is adopting the same method of dating as is used by the United States Army and Navy and government offices. This system of dating—day, month, year—is being used in all its correspondence and records, and in the articles contained in this and subsequent issues of the *Journal of Calendar Reform.*

The Association is thus carrying out the suggestion made in the previous issue of the *Journal,* sincerely believing that this is the more logical method, and that it is only a question of time when this form of dating will be used throughout the world.

Our readers also know of the Association's approval of the 24-hour clock and thus they will be interested in reading an article on the subject that appears on page 83 of this issue. To all constructive changes pertaining to time and the calendar, which are conducive to greater simplicity, equal consideration, coordination and unity, The World Calendar Association is ready to give encouragement and approval.

PARIS NEWSPAPER MAN PICTURES REHABILITATION AIDED BY WORLD CALENDAR

By Emile Rolland, Journalist

Prior to the war, Mr. Rolland was on the staff of the* Paris Soir. *Joining the Army, he was captured in 1940 and spent four years as a prisoner until liberated in September. He has returned to journalism and is a special assignment writer on financial and business subjects.

OF all the nations struck by this war, France faces the most colossal task of reconstruction and rehabilitation—a long and laborious rebirth that will only begin with the rebuilding of her shattered towns and cities. The fall of France in 1940, and the four years of the Nazi occupation, left the nation with wounds far deeper than mere bomb destruction; wounds that cut deep into the tissues of her existence as a world power and that only time, vast effort, and the invincible French spirit can heal again.

To those who see below the surface, it is evident that so much, both good and bad, that went to make up pre-war France has been swept away by the tides of war and occupation. Now that the armies of our allies have driven the invader from our soil, we realize that, while the chains of bondage have been cut away, there is a long road ahead before we reach anything approaching normal times again, no matter how soon the inevitable victory over the Germans is attained.

In this first winter of the Liberation, many Frenchmen have died of cold and hunger because the needs of the armies came first and transportation lines, already disrupted by the war, could not carry the additional burden of supplying coal and foodstuffs for the civilian population. Two and a half million of our manpower—our farmers and factory workers—are still behind the enemy lines, transported there during the occupation as slave labor—and many of those still in France are undernourished and therefore not able to make the most of their productive powers.

Our factories must be rebuilt and retooled, and we must receive raw materials in quantity before France can take her place again on the trade routes of the world. Our whole system of government and our national economy must be revised, and undoubtedly will emerge vastly different in form from their pre-war structures.

This, in fact, is the beginning of the Great Revision for France, and it is my belief that with carefully planned and executed plans, our nation will arise from the present depths a stronger and better nation than ever before. For the fact that so much has been lost carries with it the promise that only the good need be rebuilt and the bad left in the ruins, as it should be.

But the very task of planning such a gigantic metamorphosis almost staggers the imagination. There will be many mistakes and false starts, but at least we have an opportunity for fresh beginnings, a chance to try new ways and methods without first overriding the barriers of tradition that in complacent times always stand in the way of opposition.

For this reason, it seems to me that calendar reform faces its golden opportunity at a time when the whole world is eager to sweep away all the old inadequate boundaries of time-worn tradition in order to set up a better way of living for all people.

To one who has not studied it, mere revision of the Gregorian calendar may seem an esoteric contribution to the solution of the world's problems, but a little study will easily show that its vast benefits to the world of commerce would make it an important factor in postwar world trade—and I think it is obvious to all that, in the final analysis, the little squalls that arise on the trade routes of the earth are the nuclei of the storms of war that sweep periodically across the globe.

The World Calendar seems to me to offer the most practical solution of the various proposals for calendar reform, since it contains all the desirable factors while at the same time it can be adopted with so little confusion that there could hardly be any valid opposition to it from any but the most stubbornly reactionary quarters.

If it were proposed vigorously at the Peace Conference, where virtually the whole world will be represented to work out the problems of the postwar patterns of life, it should gain valuable support. For it seems to me that our statesmen have already implicitly declared that the silencing of the guns will be only the first step toward the winning of the peace. They are conferring, investigating, planning now in almost every line of human endeavor, to find a pattern in which mankind can live in peace.

The problems of postwar France are in their way the same as those of the rest of the nations—a case of rebuilding almost from scratch, and add-

ing the new where improvement can be made on the old. This is a mighty task of scheduling, of dove-tailing of effort, of elimination of red tape and unnecessary barriers.

Months of effort, millions of dollars and pounds and francs could be saved alone through the adoption of The World Calendar which would provide, if nothing else, a year divided into equal quarters, which would remain stable from one year to another. The savings in bookkeeping alone would be staggering.

But what I want to emphasize chiefly here is that now, with the rebuilding of the world about to begin, is the time for our statesmen to give more than lip-service to the need for calendar revision and consider it seriously at the Peace Table.

EDITOR'S NOTE: This article was received by the Association 16 April, before V-E Day, 8 May.

THAT EXTRA SUNDAY

From* Editor and Publisher, *New York, N. Y., 14 April 1945

THE vagaries of our calendar continue to cause trouble for the War Production Board and our newspapers under newsprint rationing. Last September, Sterling Graham, general manager of the *Cleveland Plain Dealer*, pointed out to the Newspaper Advisory Committee of the WPB that leap year, instead of providing an extra day of publication for six-day newspapers, fell on a Sunday, making 53 Sunday publications against a quota base of 52 in 1941. Earlier in the year the WPB had authorized an extra day's newsprint tonnage to daily papers on appeal that leap year was an extra day in February.

Later when brought to its attention, the WPB refused to allow extra tonnage to Sunday papers for the 53d issue on 31 December but authorized those publishers to borrow from the first quarter of 1945, in which there were only 12 Sundays instead of 13.

Mr. Graham pointed out that this was only a temporary expedient and that the situation would again confront Sunday publishers in the third quarter of 1945 which has 14 Sundays instead of 13. And the 1946 calendar does not provide any extra Sundays from which to borrow.

Sunday publications use anywhere from five to ten times as much paper as daily newspapers. To print on that day without an extra allotment of paper will mean that seven-day newspapers must drastically curtail every issue in the quarter, or suspend daily publication for from five to ten days to obtain the paper.

There are 481 Sunday papers in the United States, according to the E&P Year Book, accounting for a lot of newsprint that will be affected by this situation.

We trust the current request of Mr. Graham for careful deliberation of this case will be granted by the Advisory Committee and that either the proper amount of paper is granted, or some solution is arrived at that will be fair to all newspapers, six and seven-day papers alike.

ONE WORLD CALENDAR FOR ONE WORLD

By Elisabeth Achelis, President, The World Calendar Association

A year ago, Miss Achelis was invited by the Ottawa and Montreal Centres of The Royal Astronomical Society of Canada to speak on The World Calendar. This year, 3-8 April, she was asked to address the Hamilton, London, Toronto and Windsor Centres, as well as the Detroit Astronomical Society. The address appears below.

AGAIN I am honored and privileged to return to Canada and address other Centres of the Royal Astronomical Society. I am beginning to feel quite at home in your country because of the warm friendship with which your Society has welcomed me a year ago and again tonight.

Nations and peoples are recognizing that our planet Earth is one entity—one world, rather than divided or isolated, one section from another. Slowly but surely, we are seeing barriers between nations razed and differences and prejudices giving way to greater understanding. We are observing that whatever event or condition affects one part or section of the Earth affects the whole, and that all these events and conditions are recorded by means of the calendar. Thus the calendar is really a great uniting force and should be recorded under one world system also, for the calendar likewise affects peoples and nations as do events and conditions.

A recent book, *The Treasury of Science,* edited by Harlow Shapley, contains a section on "The Heavens" wherein one reads that "the supreme discovery of science [is] the orderliness of the universe." This is further explained as an orderliness wherein celestial phenomena recur in regular sequences and that the succession of events, although often somewhat complex, is nevertheless systematic and *in*variable. A majestic order prevails in the heavens.

Now it is a similar orderliness that calendar reformers wish to bring to our present *dis*ordered calendar, for they realize that only with order and careful planning will civilization and peoples really progress and achieve better results and conditions.

The regular sequence of celestial events in which we are directly con-

cerned is the solar system of which the Earth is a part, a small part it is true but very vital to us. The rhythmic and regular order in which the nine planets revolve around the sun, each planet circling around its own axis yet remaining within its own prescribed sphere, is the supreme system of order and harmony known to man. It is divine in concept, divine in achievement, governed by sublime wisdom, supreme intelligence, perfect justice and infinite understanding. Man has ever stood in awe before it, not realizing that he too might fashion his various systems on a similar pattern.

We notice that among the planets, Mercury, the smallest and closest to the sun, takes 88 days (according to our reckoning of time) to complete one trip around the sun. It takes Earth to complete one such trip 365 and a fraction of a day, Jupiter 12 years and the last and most recently discovered planet, Pluto, 249 years.

How mathematically complex and different is the length of time it actually takes each planet to finish one full course around the sun yet everything moves in harmony and order. Each planet stays within its own orbit, realizes its own importance, and has its own particular work which no other planet could possibly do. Notwithstanding their distinctive individualities and differences, they all belong to the solar system, are inextricably united and related, indivisible and inseparable parts of the whole system.

In earlier days it was the solar system (in which man also included the stars and the moon) that gave man his first sensation of movement, of progression. It was this steady recurrent celestial motion without beginning or end, that continuous flow of the passing heavenly scene, that awakened in him his first concept of Time. Man began to associate time with the moon and her regular four phases. The moon gave him his first idea of a calendar.

In the gradual process of man's growth and the steady evolution of civilization from the ancient past down to the present and out into the future, there occur certain historical events that profoundly affect the world, compelling man to orient himself anew. He is ever forced to accept a new outlook on life and conditions. He has to take a bold step forward, willingly allowing the past to rest with the past, in order to progress.

One such notable and far-reaching event was the courageous act of the ancient Egyptians when they discovered that the sun influenced the seasonal year. Deliberately and unequivocably they discarded the moon for the sun as the basis of calendar reckoning. By accepting the longer time-period of the seasonal year, the Egyptians advanced to greater progress which would not have been possible had they retained the moon

calendar. Speaking astronomically, this seasonal solar calendar, adopted a *mere* six to seven thousand years ago, was the basis of the succeeding Julian and now of our present Gregorian calendar.

Another epoch-making event centuries later was the discovery made by Copernicus and nobly supported by Galileo that the Earth was neither flat nor the center of the universe but a rotating sphere revolving around the sun.

But how much more evolutionary is the present World War wherein everything is undergoing change and new concepts are beckoning us all onward! It is compelling man everywhere to take on a new outlook on life in its many phases and conditions. Nothing remains untouched and unchanged, and happy are those who, understanding, are flowing with this tremendous tide that seeks to purge the Earth of old ills and obsessions.

Among the inevitable new conditions is the perpetual World Calendar of 12 months and equal quarters which, with its one or two new World Holidays, will achieve an orderliness, stability and harmony in our time-system that is so significant a characteristic of the solar system.

Your past President, Dr. A. Vibert Douglas, M.B.E., as Dean of Women at Queens University, Kingston, Ontario, in an address before the Royal Canadian Institute, November, 1940, said:

> "The success which has attended man's efforts to solve some of the problems of space and time, and the vast picture of an ordered universe that he has unfolded are a challenge to mankind today to view the discord and tragedy of terrestrial things against a cosmic setting and turn his attention to the international task of establishing upon the earth some semblance of the majesty, beauty and harmony of the universe of stars."

Calendar reformers are endeavoring to impart to the various time-units in the universe of Time—as measured by the calendar—"some semblance of the majesty, beauty and harmony of the universe of stars."

It doesn't take much scrutiny to draw the conclusion that our present Gregorian calendar is the direct antithesis of the principle of the solar system. It completely lacks order and harmony. Days, dates, weeks, months and quarterly divisions of the year have no regular places in the calendar. They wander about in an aimless fashion. Days and dates never agree, weeks run in and out of months in an unpredictable way, months are unjustly irregular in length, quarterly divisions are unequal in that the first two are deprived of their rightful length while the last two quarters have an excess of days, and a year is never fully complete with its different time-units. The week is always short one day so that each year must steal a day from the following week to complete itself, and sometimes a year enters into a 53d week. Every ordinary year con-

tains one day and in leap years two days over an exact number of 52 weeks. All this confusion naturally creates conflict. It is little wonder, then, when we consider the importance that Time plays in our daily affairs, that everything we do is tinged with conflict as well. Like begets like.

Comparing the planets of the solar system with the conflicting time-units of our present calendar, let me personify them in a similar manner. We just cannot conceive of Venus, so envious of her neighbor's larger size, that she forcibly intrudes upon Earth to annex a part of Earth's sphere; or that mighty and powerful Jupiter, ignoring space and distance, takes from Earth her only moon to add to his other 11 moons because Earth, according to Jupiter, has no right to this particular possession; or that Mars, jealous and angry in not having rings like Saturn, aggressively enters upon Saturn's domain to take from it at least one of the longed-for rings. No, the various planets under the magnetic rulership of the sun are above such petty, selfish, greedy and unworthy ambitions. They know that were one of them but for one instant to harbor any such base ideas the entire solar system would disintegrate and collapse. While we do not collapse with the use of our calendar, *we do suffer with it.*

The new perpetual World Calendar removes all this conflict by arranging the days, weeks, months, quarterly divisions or seasonal periods of every year in a system of order and equality. Each time-unit has its rightful place in the calendar so that the year contains exactly 364 days, 52 weeks, 4 quarterly divisions approximating the 4 seasonal periods, and 12 months.

Reducing the year into sections of four quarters, we find that each quarter has 91 days, 13 weeks, 3 months or one season, always begins on a Sunday—the first of January, April, July and October—and always ends on a Saturday—the 30th of March, June, September and December. Each month has 26 weekdays plus Sundays and the unreasonable difference that exists in the present calendar (such as the short February or two successive long months of 31 days) will disappear.

The World Calendar is orderly and systematic in arrangement with an invariable variation in the three months that avoids mechanical monotony and rigidity. As the four seasons vary within the year, so do the three months vary in the quarterly divisions, without either losing in any way their regular sequence and order.

To conform to the necessary 365th day every year and the 366th day in leap years, these two days that are so essential in keeping the calendar in step with the seasonal year and in obtaining a newly found stability, are added to The World Calendar as Year-End Day at the close of the 364

days every year and as Leap-Year Day, inserted in the mid-year, following 30 June. They are the new World Holidays—forerunners it is hoped of better days to come.

The changes are few. But one or two days call for a rearrangement between 28 February and the 1st of September; the other months remain the same in both the Gregorian and The World Calendars. The Year-End Day World Holiday, W December, is identical with the old 31 December. Instead of this day coming on any day of the week as it does now, the old 31 December, which is the new W December, World Holiday, will always come on the extra day following 30 December, which we suggest as an extra Saturday instantly denoting the last day of the calendar year.

The acceptance of the World Holidays by the people takes courage, vision and faith; a pioneering spirit that unhesitatingly accepts the new. These stabilizing and unifying days, as yet untried, will prove an open sesame for greater understanding among peoples.

Here then is a time-plan that typifies coordination, cooperation and concord in contrast to the Gregorian system of confusion, competition and conflict.

Although an improved calendar has been advocated for many years before this World War, it is more of a vital need today than ever before, because meticulous timing and accuracy in every detail are imperative in the world today.

Let me cite you a confusing condition in dating and a curious coincidence.

I had written a brief item for the *Journal of Calendar Reform* on the confusion to historians regarding the different methods of dating in use in the various countries. In the United States of America it is the custom to date letters and documents in the order of *month*, day and year such as December 3, 1945, which in digit form is 12/3/45, whereas Great Britain and other countries use the order of *day*, month and year, namely, 12th of March 1945, which in digit form is also 12/3/45, identical to the American date of December 3, 1945. I then concluded with these words: "Certainly with the adoption of The World Calendar, or even before if desired, it would be a gracious and wise act for the United States of America to establish the same method used by other countries."

On 14 March, when the galley proof of this item came to the office, the Associated Press in the afternoon of the same day carried a story on Major Randolph Churchill, wherein he requested Lord Hinchingbrooke to ask Prime Minister Churchill to adopt a uniform system of dating throughout the governmental departments. He urged the order of *day*, month and year and mentioned as an example 1st of October, 1945, which in digit

form is 1/10/45. Thus by the English method the 1st of October, 1945—1/10/45—is in the American usage January 10, 1945.

Here then were two people, unknown to each other, one a Britisher in the Mediterranean area and the other an American in New York City, simultaneously reaching the same conclusion as to uniform dating.

Uniformity of dating among the nations leads directly to a uniform and reliable calendar—The World Calendar with its equal quarters.

A generally acknowledged fixture in calendar recording, particularly, perhaps, in the field of government and finance, is the quarterly division of the year. It is the accepted basis for quarterly statements and government accountings in Washington where Federal departments are required to make quarterly statements to the Director of the Budget. While it is true that monthly statements and, in certain instances, weekly statements are prepared for government offices and business organizations, these refer to internal accountings. Quarterly statements and reports are used for external and public purposes, such statements offering at all times a broader field of survey and analysis, and giving a better perspective than can be had when only the smaller periods of months, weeks, or days are used.

Irrespective of what particular unit the various governmental departments use in their special field of accounting, be it on a weekly, monthly or quarterly period, these *all agree* at the close of every quarter-year in the new perpetual World Calendar. The practicality and ease of this new time-plan become immediately apparent. The regular and comparable 91 days or 13 weeks or 3 months within every quarter division are *interchangeable.* This is simplicity itself. The calendar thereby achieves a degree of perfection never as yet attained. Certainly today, when unity of action and clarity of statement are more important than ever, *a simplified calendar with its stabilized interchangeable time-units is indispensable.*

Quoting from an article on chain store operations by Ivan Burdick, former general manager of Canada's Stop and Shop Chain, merchandise manager of the Dominion Stores of Canada, and recent director of food rationing of the Office of Price Administration in Washington:

> "The 'period' in the industry is the 'quarter,' not the week or the month. Three months is the closest, most practical expression of the 'season,' which is the real operating period. The best that operating executives can hope to do, restricted as they are by irregular and incomparable days, weeks and months, is personally to know what goes on four times a year, and to do something about it. Any more frequent presentation of figures is Utopian, any less is dangerous. Four quarterly analyses for scientifically equalized periods are ideal. I am for it."

The equalized quarters are as important to finance as they are to the

government. They have an even greater appeal to the average person since economics affects every one of us.

In our present calendar where the quarters vary between 90, 91 and 92 days, it is the custom of many bankers to reckon a 90-day note as one-fourth of a year, or a quarter-year, based on the 360-day year with corresponding cost to the borrower. This injustice is unavoidable wherein quarters, months, weeks and days fluctuate as they do in the present calendar.

With the use of the stabilized and equalized quarterly periods of The World Calendar justice will be had. There is no variation from the convenient 12-month year and no cause to abandon the equally convenient periods of halves, thirds, quarters and sixths. Each quarter payment is reckoned on the 91-day period based on the 364-day year, and a quarter-year interest is paid for 91 days of actual use or one-fourth of a per annum rate. Thus in a 91-day quarter, by making the quarter the unit, 30 days is one-third of it. The 91st day of every quarter is caused by the first month having five Sundays. Likewise equal quarters give equal half-years of 182 days each, plus the new World Holiday Year-End Day that terminates every year. This day as well as the Leap-Year Day is not reckoned in the regular business year as both are non-working days.

In addition, quarterly payments on insurance, installments, dividends, interest, mortgages and loans will always fall due on the same weekday and month-date in every quarter division and the year itself. Arrangements to meet such payments will be greatly facilitated.

For the banks: the monthly statements, interest on individual loans, capital to be advanced to business organizations, and international indebtedness, can be easily met and arranged for when the entire world, nations, governments, business, banks and individuals, all use the self-same, equalized and equitable, stable World Calendar.

In the field of publications such as the Canadian MacLane's magazines and *Saturday Night*, advertising contracts are made on the 13-week basis, similarly as the weekly magazines in the United States. This 13-week period will be identical and interchangeable with the equal quarter-year division of The World Calendar. And radio, too, which has for many years functioned on an arbitrary 13-week or a quarter-year period, will benefit with the new system of equal quarters.

We have frequently been asked, "What about the calendar manufacturers, are they not being discriminated against?" Calendar-makers will not suffer with the calendar every year the same, just as clock-makers do not suffer with clock dials always the same. A recent letter from England inquired, "Would not the perpetual World Calendar create a calendarless

future?" Emphatically NO. The business world and our homes would become quite cheerless without the many artistic and decorative calendars that appeal to our eyes, emotions, and sense of beauty. And besides, human nature likes a certain ordered variety. There will always be a demand for different calendar designs, and calendars which carry the phases of the moon or the changes in the tides must obviously be brought out anew every year. Almanacs, diaries, desk pads and notebooks are utterly worthless after one year's use and call for replacements. But the mechanical set-up of the calendar itself will be vastly simplified when the calendar-pattern does not change, when every year begins with Sunday, 1 January, and closes with the Year-End Day, World Holiday, the day that is so rich in meaning, suggestive of world unity, international observance, and national, civic and social cooperation.

In reforms of whatever nature there seems to be of necessity some opposition. Now opposition, when given free expression, serves to restrain hasty action and leads to more comprehensive study of the subject in hand. The World Calendar is no exception. The opposition to it is directed at the one or two World Holidays on the ground that these break the alleged continuity of the seven-day week since time immemorial. You astronomers, dealing as you do with the problematical age of the world, will realize that this stand is untenable.

Ancient history, ancient ideas on astronomy, on natural phenomena and on religion must be approached with tolerance. There is too much hidden and as yet not known or understood that prevents us from taking so definite and dogmatic an attitude. The particular opposition, recently expressed by certain religious minority groups, sincere though it be, appears to be based on an unreasonable fear of the new and a blind adherence to the old.

In a way, however, this opposition is enhancing the value and revealing the benefits of these extra days—the new World Holidays. The opposition clearly reveals that a broader outlook must prevail so that the general good of mankind shall *not be hindered* by backward-looking groups. The pioneering spirit, that overcomes all obstacles, is essential in bringing about this much-needed revision of the calendar. We only have to recall Copernicus and Galileo, Pasteur and Curie, the recent discoveries of electricity, telephone, and radio, to realize that vision, courage and faith are qualities on which the world moves forward. To stand still is to stifle progress. It is the privilege of us all to uphold and to work for this indispensable new time-plan that is inevitable.

May I also remind you that the adoption of the reform of the civil calendar belongs to the governments and that religious feast-day ob-

servances, among them a fixed Easter, are within the province of the churches.

It is now my great pleasure to tell you that in the favorable report of the Ottawa Centre on calendar reform, published in the *Journal* of your Society for July-August, The World Calendar was approved by a "high majority," with the suggestion that the other Centres of your Society inform the General Council of their opinions, so that The Royal Astronomical Society of Canada as a national body may endorse it. I sincerely hope the Centres will follow this wise suggestion.

You may also like to know something of the progress The World Calendar has made since my last visit to Canada a year ago.

Mentioning a few of the endorsements for this new calendar, I include the Council of the Board of Trade in Halifax, Nova Scotia, the Association of Professional Engineers of the Province of New Brunswick, the Engineering Profession in British Columbia, and the endorsement of the Canadian Retail Federation provided The World Calendar receives general acceptance throughout Canada; in America—the American Institute of Accountants, the National Council of Geography Teachers, the Executive Committee of the Texas State Teachers Association and the International Affiliation of Sales and Advertising Clubs which includes Canada and the United States; in other countries—the Australian Branch of the British Institute of Physics, and the Mexican Hotel Association. Here is certainly an international collection of endorsements.

Today, the world is experiencing an inspiring and thrilling demonstration of cooperation in that the United Nations are standing foursquare in their joint efforts for the winning of the war. Other evidences of cooperation are the international conferences held on postwar programs and peace plans, such as Bretton Woods, Dumbarton Oaks, Yalta, Chapultepec and the forthcoming conference in San Francisco. These are all decidedly hopeful signs of a newer spirit of a commonwealth of purpose and ideals welling up from the hearts and minds of men. In such manner we are building not only one world but one *united* world.

Toward the furthering of these practical ideals we would be greatly aided were we to establish systems based on the same cooperative principle such as we have seen in relation to Time, as it is served by The World Calendar.

By adopting The World Calendar together with the uniform dating method of which I spoke earlier, and with the uniform use of the 24-hour clock time on which I spoke before the Ottawa and Montreal Centres a year ago, these three distinct time-instruments might easily pave the way for the ultimate acceptance of other constructive and international reforms.

Thus we urge that these three time methods should be earnestly considered and approved in international programs, discussions and conferences dealing with present day conditions, postwar programs, and peace plans. Being free from the human equation and nationalistic aims, they may easily lay foundation stones upon which to build the world on more secure and solid ground.

The time is here and now for everyone to act within the immediate next years, before 1948, so that plans may be made to adopt The World Calendar, Sunday, 1 January, 1950. This date is important in that both the old calendar and the proposed new calendar agree. Not until 1956 will another such opportunity arise, and certainly to delay ten years from now is not justified.

We may with benefit recall President Roosevelt's recent words regarding the establishment of an international organization, when he reported before the Congress of the United States on the conference with Prime Minister Churchill and Premier Stalin at Yalta. He said: "This time we are not making the mistake of waiting until the end of the war to set up the machinery of peace." *And neither should calendar reform be compelled to wait.*

Man, as he uses The World Calendar in his measurement of time, repeating the words of the former President of your Royal Astronomical Society, will have turned "his attention to the international task of establishing upon the earth some semblance of the majesty, beauty and harmony of the universe of stars." Thus the principle of the solar system will have become manifest on Earth by means of the uniform 24-hour clock, the uniform method of dating, and the uniform use of the steady and ordered World Calendar: stalwart pillars upholding the principles of coordination, cooperation and equality, which have a deeper meaning and a fuller understanding for making this world of ours—ONE UNITED WORLD.

CALENDAR COMMITTEE BEING FORMED IN INDIA

DR. MEGH NAD SAHA, Professor of Physics, Calcutta University, during his recent visit in the United States, made it known that he would like to meet Elisabeth Achelis, President of The World Calendar Association. A luncheon was arranged where calendar reform was generally discussed.

Professor Saha is a firm believer in The World Calendar and frequently mentions it in his lectures and writings. He offered to assist The World Calendar Association in India and, at the suggestion of Miss Achelis, agreed to be the chairman of a World Calendar Committee which he would form upon his return to Calcutta.

This will be good news to the members of The World Calendar Association in India, and the Association requests that they get in touch with Professor Saha and cooperate with him.

DETROIT ASTRONOMICAL GROUP ASKS STATE DEPARTMENT TO ACT ON THE WORLD CALENDAR

Detroit Astronomical Society
Wayne University
4841 Cass Avenue
Detroit, Michigan

May 15, 1945

The Honorable
Edward R. Stettinius, Jr.
United States State Department
Washington, D. C.

Dear Sir:

At the monthly meeting of the above Society on May 13th, it was unanimously resolved that the secretary be instructed to write to the United States State Department endorsing the proposed World Calendar of twelve months and equal quarters, pressure for world acceptance of which is gaining increasing strength as the calendar becomes more widely known.

At the same time, endorsement was given to the uniform 24-hour clock calculations and uniform dating methods of day, month, year. These civil reforms we consider would create a universal and progressive link with all the peoples of the world.

We point out that a suitable occasion for world adoption would be when both the Gregorian and the World Calendars synchronize by commencing on Sunday, January the First, 1950.

The headquarters of The World Calendar Association, Inc., is at International Building, 630 Fifth Avenue, New York City 20, the president of which is the indefatigable Miss Elisabeth Achelis.

Now that postwar programs and wholesale plans for world betterment are receiving great attention, we consider this to be the time to bring forward "this brave new calendar for a brave new world," to quote from a Detroit columnist.

I have the honor to remain,

Yours very truly,
Mrs. Margaret Back
Secretary

P. S. Copy also sent, addressed to the National Academy of Sciences, Washington, D. C.

THE SEQUENCE OF DAYS IN THE CALENDAR

By Dr. C. A. Chant

From **The Journal** *of The Royal Astronomical Society of Canada, April 1945*

C. A. Chant, LL.D., is Honorary Chairman of the Toronto Centre of the Royal Astronomical Society, Emeritus Director of the David Dunlap Observatory, and Editor of the above mentioned journal.

OF all the plans proposed for improving the calendar, that designated "The World Calendar" appears to be the favorite. Of course, not every one approves of it. Not long since I received a booklet from an organization, which has the word "Liberty" in its name, strongly protesting, by words and pictures, that this calendar is a threat to our religion. In my view the adoption of "The World Calendar" will not deprive anyone of his religious freedom but may indeed make it richer and fuller.

The core of the objection raised against the proposed new calendar is that in it the regular sequence of the days of the week—Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, etc.—will not continue forever in that order without some interruption.

An ordinary year contains 365 days, i.e., 52 weeks and one day over, and a leap year contains 366 days or 52 weeks and two days over; and if the calendar is arranged so as to be the same year after year, which is extremely desirable, it is clear that in every ordinary year one day bearing a new name (such as "mid-year day")* must be inserted among the other days and not included in any particular week, and in a leap year two such days must be inserted. Should this be considered an interference with religious observance? I do not think so.

I have the utmost consideration for anyone who has religious difficulties, and would regret any enactment which would offend any person's religious belief.

This is hardly the place for religious argument, but perhaps I may be allowed to state my own personal views on this question.

In my childhood I was taught the Commandment, Remember the sabbath day to keep it holy (Ex. 20.8), and I have tried to observe it ever since. I have done so for two reasons: (1) I accept it as a divine com-

*EDITOR'S NOTE: Year-End Day in ordinary years.

mand; (2) because its wisdom has been justified by social and industrial experience—one day in seven for rest and worship. In the Old Testament there are many instructions regarding the sabbath which we do not consider binding in the circumstances under which we live and which have been superseded by the simple teaching of the Founder of the Christian religion.

We are all familiar with the incident of the Master and His disciples passing through the corn fields on the sabbath day, how the disciples plucked the ears of corn and ate them, for which they were roundly condemned by the Pharisees for doing what was not lawful on the sabbath day. Jesus defended His companions and offered some explanation of the principles of sabbath-observance. The gospel continues, "And he said unto them, The sabbath was made for man, and not man for the sabbath. Therefore the Son of Man is Lord also of the Sabbath." (Mark 2.27-28.) The matter is also referred to in Matthew 12.8 and Luke 6.5.

To me, as one accepting the teaching of Jesus, the doctrine enunciated here is that a person should not be tied to any ritual observance by any unbendable regulation, but should use his own reasonable judgment. The great principle inculcated, I take it, is to devote not less than one day in seven to rest and worship, though not necessarily the same day or days of the week. If the calendar supplies one or two more during the year, or perhaps if the Government or the Church calls upon us to observe any special day, our opportunity is all the greater.

As an astronomer I cannot understand why anyone should choose any special unalterable day as his time for worship. A day is defined as an interval of time 24 hours in length. Now a day, such as Sunday, 19 November, at Toronto, does not coincide with any equal interval, of the same day and date, at San Francisco or Moscow or Auckland. Is one more holy than another? If you take a passage across the Pacific to Asia the name of the day used by an inhabitant there is not the same as that by your own reckoning. If you think it Sunday he will have it Monday. Which will you use? When I crossed the Pacific going west the days ran as follows:

Thursday, 29 June; Friday, 30 June; Sunday, 2 July.

I celebrated no Dominion Day that year. On the return trip east the days were:

Friday, 3 November; Saturday, 4 November; Saturday, 4 November; Sunday, 5 November.

There were two days called 4 November—an interpolation of a day. Special artificial devices must be employed to overcome the peculiarities in our time-reckoning encountered in traveling.

Our brethren of the Jewish faith ordinarily use for worship a different 24 hours from ours; and the Yezidis, a race in the mountains in North

Mesopotamia, keep Wednesday and Friday as holy days. We should not make a fetish of any special days of the week and we should hardly do so if we remembered the most fundamental fact of all worship—"God is a spirit and they that worship him must worship him in spirit and in truth" (John 4.24).

It may be well to remark that it is the business of the astronomer to determine the precise length of the year in terms of the day, that is, to lay down the mathematical basis for the calendar; but the arrangement of the days in the months and the months in the years should be the most effective possible for carrying on the business of life, our worship, our play, our industry.

OBITUARY NOTES

THE REVEREND FRED WINSLOW ADAMS, D.D., LL.D., of the Copley Methodist Church, Boston, and former Professor at the Boston University School of Theology, died 20 May at the age of 79.

He was a member of The World Calendar Association for many years and wrote several articles which appeared in the *Journal of Calendar Reform*. Writing on The World Calendar, he said: "The World Calendar is a consummation of the best thought of the 20th Century. It is a gleaning of the fruitage of calendar making of previous civilizations. What science has been doing in recreating the world, The World Calendar is doing in harmonizing time to a new step, not only for our day, but for long days to come." He also supported a fixed Easter: "The plan to secure a fixed date for Easter deserves support. . . . It seems a lack of wisdom not to change now. It would be easy by vote or decree to rectify this error of a wandering Easter."

THE REVEREND DR. LEWIS S. MUDGE, prominent minister of the Presbyterian Church, Moderator of the Presbyterian General Assembly in 1931, and Stated Clerk from 1921 to 1938, when he was named Stated Clerk Emeritus, died at his home in Bryn Mawr, Pennsylvania, 29 April, at the age of 76. He was credited with having played a large part in the formation of the constitution of the World Council of Churches.

Along with many other Presbyterian ministers he believed in The World Calendar, and had been a member of the Association since 1934.

DR. BERNHARD OSTROLENK, nationally known economist, author, and a member of the faculty of City College, died 26 November, while driving his automobile near his home in Solebury Township, Pennsylvania. Born in Warsaw, his early interests became agriculture, economics and cooperatives. One of his books, *Economic Geography of the United States*, is now in general use in colleges throughout the nation. He had been very much interested in The World Calendar since 1937, when he became a member of the Association.

ASKS FOR DEFINITE ROUTINE IN HOME MANAGEMENT

By Agnes Adams Murphy

***Mrs. Murphy's food page appears daily in the* New York Post *under her "by-line." Agnes Adams Murphy did not take over the editorship without a great amount of background and experience. She received an A.B. degree from Wilson College in Chambersburg, Pennsylvania, took postgraduate work at the University of Pennsylvania, at New York University, and did special study at the New School for Social Research. Before joining the* New York Post, *she was a woman's feature writer on the* Philadelphia Record.**

IN the success of American business organization, a great factor has been system. One of the prime reasons for the mismanagement of many American homes, and the lack of success of that family life, is the housewife's antipathy to planned management.

System necessitates a rigidness of discipline and devotion to routine, and for this reason has a rather harsh and unpleasant connotation. But actually, orderliness of household routine, or system, makes the housewife's duties lighter, leaves more time for leisure, and, as in the case of the successful business man, creates profits—for by saving money and spending it wisely, as she does by managing efficiently, she actually makes money.

The housewife who realizes that her household will function more smoothly as her duties become more systematized, attempts to organize her work by planning two budgets—one for time, and one for money.

Both budgets, properly synchronized, yield big dividends. Without these budgets disaster often results; not only in bankruptcy as in business but also in added expense and confusion for the housewife.

In studying the new World Calendar I am convinced that its adoption could greatly aid American homelife. Much emphasis is put on The World Calendar as a boon to every phase of business, but little is said as to its benefits which would accrue within homes throughout the world.

The orderly arrangement of the days and months, according to The World Calendar, will make it simpler for the home manager to determine the amounts of money to set aside for expenses of the home for stipulated periods of time. It will enable her to utilize her time, as well as her money, to better advantage. Its orderliness will be an incentive to the systemization of her duties.

The same may be said for the business girl, the unmarried woman, or the widow. Budgets are essential for better living. The World Calendar would aid all women in this respect, I believe.

With its regular time units, The World Calendar of 12 months and equal quarters would enable the woman to plan her activities over a wider period of time and with greater foresight than today's Gregorian calendar permits. It would allow her to plan her budget within time units that do not vary from quarter to quarter, nor from year to year, thus simplifying seasonal budget adjustments. Thus is created the perfect coordination of all the time units at the close of every quarter.

The housewife must allocate time to recurrent household duties. She must arrange for food and shelter for her family. She must anticipate replacement in home furnishings and clothes, and must set aside sums for medical care, education, insurance, taxes and entertainment. The simplest, most systematic way for her to accomplish these things is by organizing her budget based on careful forethought. An unvarying, systematic calendar would simplify matters at the beginning.

The general plan of the family budget may be set up on a broad, flexible basis. For example, in the case of a family of four with an income of $2,000.00—where money must be put to its most essential use—the initial step in planning the budget would be arbitrarily to divide earnings thus: one-fourth for shelter, one-half for food and clothing, and one-fourth for health, education, insurance, taxes and entertainment.

Adjustments must be made to meet changes in income, of course. For example, as income increases, while the quantity of food consumed will remain more or less the same, and although the quality and variety may improve somewhat, a smaller percentage of income will be necessary (set aside in the budget) for feeding the family. Concurrently, relatively more money is budgeted and will be spent for clothing, furnishings, recreation, etc.

When the family income reaches $8,000.00 a year, a far smaller percentage is spent for shelter and for food.

The family whose earnings are derived from a fixed salary, or the farmer whose major source of income is realized at marketing time when crops are sold—by knowing and reckoning his assets in advance—could

plan a complete, specific budget for the entire year, and year after year, were The World Calendar in effect, with its four quarters of equal length.

Now, under the irregular Gregorian calendar, budgeting is made doubly difficult, particularly for the family of limited income. Many firms pay twice a month, or even monthly. In some months five week-ends will occur with the expense added therein of five Saturdays or Sundays, or even five of both these most costly coupled days in a single month, facing the harassed housewife. Yes, and for the single working girl, the added cost of five week-ends may present real difficulties in such an occasional crucial month.

In budgeting under The World Calendar five Sundays occur regularly in a single month four times yearly, the first month of each quarter—in January, April, July and October. In the last month of each quarter, five Saturdays occur regularly—in March, June, September and December. With the same regularity, four times a year, under The World Calendar, the first Sunday of each first quarterly month follows the last Saturday of each third quarterly month. While these four week-ends therefore are coupled, they do not occur during the same month—and there are no five week-end individual months, as there are in certain months under the Gregorian calendar plan—and the budgeting and expense are, in consequence, greatly simplified.

The regulated sequence of days, regulated by quarters, and months with their 26 weekdays exclusive of Sundays, under The World Calendar plan, makes for this simplified budgeting—and this contributes toward more systematized and regulated shopping.

The home manager can benefit immeasurably by systematized shopping. By preparing a buying guide, by means of which she will make purchases of services and commodities at seasonal sales, she can effect the greatest savings in time and money.

Such a systematized shopping guide would be based on her knowledge of recurrent sales in local stores, regulated by the seasons and the calendar, and would involve very little paper work. It would be kept in the nature of a simple supplement to her budget, such as the following plan which coincides with the sales policies of most retail stores:

JANUARY—White sales, including household linens of all types.

FEBRUARY—Winter clothes replacements, with basically good styles selected, to be used this and the following year.

MARCH—Household equipment for kitchens, bathrooms, general cleaning, etc.

APRIL—Medical and dental check-up, in the period after Easter, when physicians and dentists are not crowded with holiday appointments.

MAY-JUNE—Sales of canned goods, to remove the previous season's remaining stock, with stores about to replenish their shelves with newly packaged goods.

JULY—Summer clothes replacements for current use and for next summer.

AUGUST—Furniture and fur sales, school preparations.

SEPTEMBER—Rug and carpet sales.

OCTOBER-NOVEMBER—Christmas shopping.

DECEMBER—Preparation for holiday festivities.

Under The World Calendar, important holidays from Easter through Christmas, and the lesser holidays from Washington's to Lee's (observed in certain Southern states) birthdays, are fixed, year after year, and thus would create a further simplification in budgeting for time and money.

Having made a general monthly plan for her spending habits and having determined the amount to be allotted to her general fund, after shelter has been accounted for, the housewife can determine how much she can spend for clothing and household goods.

In regard to the purchase of canned goods, any such foods bought at bargain sale prices will, of course, cut weekly costs. This should be accounted for in a reduction in the food costs, with consequent saving (really being earnings for the thrifty housewife) in the reduced budget for that item.

The next step is to organize her duties each week so that she can use her time to greatest advantage, permitting her leisure to develop herself along lines that will make her, and thus indirectly her family, happier. The orderly plan of The World Calendar makes this a much simpler matter, when contrasted with the disorder by days, weeks, months and quarters, and year after year, with the present calendar in effect.

Take a glance at the two calendars shown on the inside front cover page of this copy of the *Journal of Calendar Reform.* The comparisons that can be made therefrom should convince every household manager how true this statement is.

With a simple yet highly organized system of management, it is possible for the farsighted housewife to have her day's meals in preparation by noon of each day, and her home in neat enough order to receive unexpected visitors without embarrassment. She should, within this time, also complete at least part of a special chore which she sets aside for each day of her housekeeping week, and to which she may find it necessary to devote a part of each afternoon.

The housewife who has young children will find that such routine leaves

her enough time to cope with problems which arise daily in bringing up a family. And children, too, thrive under regulated and ordered systems.

Her daily plan of household duties of a special nature could be well organized along somewhat the following lines:

SUNDAY—Spiritual inspiration and restful leisure.

MONDAY—Laundry. Shopping for groceries, according to a meal plan which encompasses the entire week, and for household goods. Almost everywhere, stores will be found to be less crowded on this first of the week day.

TUESDAY—Home cleaning.

WEDNESDAY—At least part of the day devoted to community work, either at home or outside, if feasible.

THURSDAY—Special household duties, such as mending, rearrangement of closets, etc.

FRIDAY—Home cleaning and planning of meals for the following week. Also planning for and ordering food for the week-end.

SATURDAY—Part of the day preparing Sunday food, and a half a day for recreation with the family.

Household duties are repetitive and must be done at varying intervals depending on their nature. The advantages of The World Calendar to the housewife become most apparent here, for with each succeeding day falling on the same date each month, every day of the month will represent definite obligations and consequently a more simply arranged routine—reflected throughout in the other members of the household, young and old.

Thus, by conducting her household affairs with a budget for time and another one for money, the home manager can run her home like a well organized and conducted business. Provided with a logical, regular, well-balanced calendar, which The World Calendar is (and the Gregorian calendar is not) she will find it much easier to maintain an operative system, one much simpler to plan and follow from the start.

EMERSON BREWER TERMINATES DIRECTORSHIP

EMERSON BREWER was obliged to end his activities with The World Calendar Association and to relinquish the editorship of the *Journal of Calendar Reform* because of temporary ill health. The Association deeply regrets this, is sincerely appreciative of his work, and extends to Mr. Brewer good wishes for a speedy recovery and success in his future activities.

TWELVE OR TWENTY-FOUR HOURS?

By Professor W. J. Luyten

***Professor Luyten of the University of Minnesota's College of Science, Literature, and the Arts, is professor of astronomy at that state institution. He has written many papers for astronomical publications and is author of* The Pageant of the Stars, *as well as* Proper Motions of 28535 Stars. *The World Calendar Association approves the change to the 24-hour clock and believes that this article by Professor Luyten is of such general interest as to be included in the* Journal of Calendar Reform.**

TIME is the "hour-angle" of the sun says the astronomer, and in our early beginnings we counted time just that way. Two P.M., short for *post meridiem,* meant simply that two hours had elapsed since the sun was highest in the sky, at noon. But no longer so now—in modern times we have abandoned the sun itself as a time keeper because it is too erratic for our precise and complicated civilization, and we now keep time by an invention of the astronomer, the mean or fictitious sun which is a perfect time keeper.

Even so we have found that this only appeared simple, but in reality led to more complications, when every city, town, village or hamlet in the country kept its own time. Again we had to change the rules, so in 1883 four time zones were established in the United States—Eastern, Central, Mountain and Pacific Standard Time. In the following year this was extended by international agreement, but Congress officially approved Standard Time only in 1918. Now most localities on the earth keep their clocks set to the same minute and second, and differ only in whole hours. Only a few exceptions still remain, such as Hawaii and New Zealand, where an extra half-hour is added—just to keep things interesting.

All these years the astronomers, navigators and sailors who make and depend upon time more than anyone else stuck religiously to the old designation; they began their day at noon and counted through the night up to the next noon. For the astronomer who works at night and sleeps in the day-time this works well enough, but the average citizen finds it

very inconvenient to change his calendar date just when he is most active —noon. So, in 1925, yet another change was made, and beginning with that year everyone, astronomer, navigator and John Q. Public, starts his new calendar at midnight.

Not, of course, that we have really straightened things out completely. It is only just now that our past is beginning to catch up with us. For many centuries we have divided the "day," i.e., the calendar day, into 24 hours, but we don't *count* 24 hours in a day. We count twice 12. Where the number 12 comes from is obvious—we have used it ever since Babylonian times when it was realized that there are approximately 12 full moons in each year. At that, we do not count from zero to 12, but from 1 to 13. The main reason for this is that the zero is a comparatively recent human invention. That it is possible to represent by a symbol something which is really nothing did not dawn on mankind until about the thirteenth century—and a very great invention it was. Without it, our decimal system of counting would be very inefficient indeed. Imagine designing a calculating machine on which you could represent our national debt in Roman Numerals!

But to get back to the clock: we begin our new calendar day at midnight, but blithely continue to count the hours as if they belonged to the previous day, until 1:00 A.M. By having to resort to A.M. and P.M. as well we are in the anomalous position of having, e.g., 12:25 P.M. come much *earlier* than 11:25 P.M. of the same day. Our railroad time-tables print 1:20 P.M. in heavy, bold-face, black type, presumably to indicate that it is then broad daylight, but 1:20 A.M. in very light, spidery type to show that it is then pitch black night. All of these practices and habits are *explainable* in terms of our past and of the way in which our consciousness of TIME has grown throughout the ages, but the continuation of these same inconsistencies does not reflect much credit on our powers of reasoning and our efficiency in modern times.

It is high time that we followed the rest of the world and adopt a common-sense 24-hour day in which time is counted from zero (midnight) through the full 24 hours of the day to 24 o'clock at the next midnight. It would take a few days to get used to saying that the banks close at "fourteen hundred" (1400 or 2:00 P.M.), that we eat supper at "eighteen hundred" instead of at 6:00 P.M., listen to our favorite radio program at, say, 2030 instead of at 8:30 P.M. and that the last train to Chicago leaves at 2315 instead of at 11:15 P.M. This new method is really very simple when we remember to *add* the number 12 to the *old* system of counting (for example, 7:00 P.M. then becomes 1900), or to *subtract* the figure 12 from the *new* method (thus, 1900 would be the old 7:00 P.M.).

Such a system has been in use by astronomers for centuries, and following the re-awakening of science it was rather generally used two centuries ago in Italy, perhaps the first country to accept it widely, as can still be proved from some antique Italian clocks. But to most people in everyday life precise time was not important until railroads became common. It is not surprising to find, therefore, that the first serious attempts at reinstating 24-hour time generally came in connection with railroad-service. Again, in Italy, a proposal was made to introduce 24-hour time in 1867 but nothing came of it.

As usual, it remained for the French, with their flair for doing things spectacularly, to bring the 24-hour clock to the world's attention. On 31 December 1884, so a French newspaper reported: "the old clock struck twelve midnight, and the new clock, placed beside it, replied by striking twenty-four o'clock." Italy officially adopted 24-hour time on 1 November 1893, Belgium on 1 May 1897. Canada had appointed a commission to look into the matter and to try and get a 24-hour time adopted by 1901, but again nothing came of it. Sporadic converts were made in the two decades following—India began using it—and 1912 saw the 24-hour system finally adopted on the French railways, and also for government use, although provincial France retained the double 12-hour system for years to come. The railroads in the northwest provinces of Canada likewise adopted 24-hour time in 1912.

The new system's real boost came during World War I when first it was employed in Great Britain to simplify the issuing of gale and storm warnings by the Air Ministry in 1916. By an official order the 24-hour reckoning system was formally adopted by the British Army, Navy and Air Forces on 1 October 1918. Greece, Switzerland, Spain and Portugal followed suit very quickly, most other continental European countries joined during the next decade. By 1930 the new system was firmly established on virtually all the railroads of continental Europe. When Thomas Cook and Sons, International Travel Agents, began to issue their Continental Railway and Steamship Guide on the 24-hour system, the battle was won in Europe.

The railways of Great Britain still held out for some considerable time, two of them reluctantly beginning to use 24-hour time in their time-tables with continental connections, but still retaining 12-hour time for domestic use. The railroads of most other countries followed. Today our own railroads in the United States are virtually the only ones left who have not as yet caught up with this modern simplification.

In most countries, however, civilian life went on using the old double 12-hour day. Everyone who has traveled much in Europe is familiar

with the public clocks and even watches showing two sets of numbers—the ordinary set from 1 to 12, in black, and inside that another set in red, running from 13 to 24. This is mainly to aid people in their mental arithmetic and to avoid missing trains; because of our use of the decimal system, the human mind seems to have an unfortunate tendency to think of a train scheduled to depart at 1930 as leaving at 9:30 P.M. instead of at 7:30 P.M.—it takes a little while to get used to that.

In Canada there was much discussion at one time about the advisability of changing the dials of public clocks to the 24-hour division, but it was generally decided that this would not be necessary and would lead to confusion. In Great Britain the B.B.C. experimented with 24-hour time in their civilian schedules from 22 April to 18 August 1934, but the British public being conservative, like ourselves, it did not meet with great success and was abandoned again; the British government then took no action.

On the continent the 24-hour system gradually made inroads into the habits of people generally; in Holland and Belgium, e.g., all radio schedules were published in 24-hour time and theatres began to follow their lead. Nowhere did it penetrate more deeply than in France, especially in Paris; matinees began at 14:30, opera tickets gave 20:45 as the time of starting the performance, but perhaps the most effective single agency working for it was the ingenious "Horloge Parlant" the talking clock introduced by M. Esclangon, director of the Paris Observatory. By having a recording synchronized with the master clock of the observatory it became possible for every telephone subscriber to "call" this clock, and be "told" the exact time any moment of the day or night. The radio networks put this talking clock on the air several times a day, especially on the whole hour when a precision time signal would be broadcast as spoken by the clock; "the fourth dot will be exactly thirteen hours," etc.

The U. S. Navy has had the 24-hour system in use for many years; both Army and Navy have used it exclusively in this war. They have introduced the further simplification of always using a four figure number, thereby not only systematizing it but simplifying the pronunciation as well; thus, breakfast may be at 0630 (zero-six-thirty), drill at 0700 (zero-seven hundred); or a person may have to stand watch from 0800 to 1200 (zero-eight hundred to twelve hundred), chow may be served at eighteen hundred (6:00 P.M.) and lights out at twenty-two hundred (10:00 P.M.).

The unqualified success of the system during this war and the rapidity with which everyone has been able to readjust himself to it prove that the 24-hour system is here to stay. It is high time that we introduce it into

civilian life in the United States. We hope that especially our railroads, which were farsighted enough to take the lead in establishing Standard Time zones some sixty years ago, are still as progressively minded today. The adjustments we should have to make are so trifling that everyone would get used to it in a few days and the benefits we should reap from the simplicity and straightforwardness of the 24-hour system are considerable. There will, of course, always be members of Congress who will claim that their constituents' cows refuse to be milked on 24-hour time, but the rest of us will want to keep the wheels of progress rolling *forward.*

ONE OPPORTUNITY LOST

From Waterbury, Conn.*, Democrat, *21 March 1945

FEW people realized it but a golden opportunity slipped through our fingers on 1 January this year. That was to have been the day on which we changed from the present or Gregorian calendar to the new World Calendar. The change was particularly opportune this year, because the dates conformed with the beginning of the week, which makes a transition from old to new much easier than at some other day of the week. However, advocates of the so-called World Calendar won't let this disappoint them too much. They must have been convinced that a world war of the proportions of the current one certainly would never permit adoption of a calendar reform that should have the endorsement of every civilized nation.

After the war is over the reformers can tackle their problem with renewed effort. They will have enlisted more recruits, both within and without the government. They will have had a chance to spread their gospel into more lands. They will have had a chance to correct any slight discrepancies in their calculations. They will be able to set up a new starting point from which the reform may start. It may be for the best that the change wasn't made at such a disturbed period of world history as the present one. Certainly the cadence of war production will bring home to more people the importance of regularity in our calendar.

Of all the various calendar reforms that we have seen or studied that of The World Calendar Association appeals to this writer as having a sound basis. It is not a theoretical thing, but is well thought out and gives promise of permanency. Furthermore it answers the objections that might be entered religiously, racially or nationally. Naturally, sentiment must suffer a wrench or two, but time is a speedy eraser of any such pangs. After the war is won we look for renewed efforts to bring this needed calendar reform to the fore in the plans for a new world order that means so much to the future peace and stability of all nations, big or little.

AGRICULTURAL HISTORY SOCIETY PRESIDENT ADVOCATES WORLD CALENDAR

Abstracted from a talk by Dr. Arthur G. Peterson, President of the Agricultural History Society, before the Viking Club, Washington, D. C., 29 December 1944.

IN ancient times man measured time by the sun and the moon and the seasons. Our Scandinavian forefathers of long ago counted years by the winters. Perhaps each long, cold winter, once it was over, seemed like a landmark in a lifetime.

It was not the night, nor the day, that got the ancient timekeepers into trouble. It was the moon and the lunar month. There may be miscalculations by the light of the moon when a man falls in love—as young men sometimes do. But in ancient times even the old men of the monasteries were led astray in their computations by the moon.

The lunar month is the interval between two consecutive new moons, or roughly 29½ days. The lunar year consisted of 12 lunations, or 354 days. Methuselah, according to the Book of Genesis, lived to be 969 years old. This may have been 969 lunar months, or nearly 80 solar years; a ripe old age even today with our highly developed medical science. Despite some adjustments in the use of the short lunar year—compared with the solar year—the winter months had been shifted back into the fall, and the fall months back into the summer, by the time of Julius Caesar. Caesar, therefore, abolished the lunar year in 45 B.C.—the year before his death —and adopted the solar year from the Egyptians.

The Julian calendar established New Year on 1 January. The first month of the year had been named January after Janus the Roman God. Janus, as you may recall, was literally two-faced and served as a protector of both sides of gates and other entrance-ways.

Various dates have served as New Year's Day. Among the Egyptians and Persians the year began on 21 September, the fall equinox; 21 December was New Year's for the Ancient Greeks and Romans. The spring

equinox, 21 March, always has been the Jewish Ecclesiastical New Year; 24 March was New Year's Day among medieval Christians, including early New Englanders.

Christmas was not celebrated on 25 December until in the Fifth Century A.D. Although the birthday of Jesus Christ has not been definitely determined, the Catholic Biblical Association, not long ago, after studying 19 centuries of archives, fixed the exact date of the crucifixion of Jesus Christ as the 7th of April 30 A.D. At the same time the birth of Christ was found to have occurred sometime between 6 and 4 B.C. Thus, Jesus apparently was born "Before Christ."

The Julian calendar year exceeded the solar year by 11¼ minutes, or approximately one day in 128 years. By 1582 the accumulated excess had pushed the civil equinox of the Julian calendar 10 days ahead of the astronomical equinox. Therefore, Pope Gregory XIII in that year directed that 10 days between 4 and 15 October be suppressed or dropped as it were. This, along with some minor changes, established throughout the Catholic countries of Europe what has since been known as the Gregorian or New Style calendar. The Protestant countries were slow to adopt the Gregorian calendar. Sweden adopted it in 1753, Germany and Denmark in 1700, and Great Britain and American Colonies in 1752. By that time the old Julian calendar was 11 days ahead of time and the adjustment was made by having 14 September follow 2 September.

There were labor unions in those days, too, or guilds as they were called. They insisted, without success, on having pay for the 11 missing days. The shift to the Gregorian calendar in the American Colonies in 1752 resulted in moving Washington's Birthday from the 11th to the 22nd of February.

Russia adopted the New Style calendar in 1918, but later experimented for a time with other calendar changes. Turkey, in 1927, apparently was the last country to adopt the Gregorian calendar.

India has 17 important calendars; resulting in considerable confusion. The Chinese and Mohammedan calendars are used by millions of people in Asia.

The evolution of our complex society has been accompanied by many proposals for calendar reform. More than 500 plans for changing the calendar were presented to the League of Nations between 1923 and 1931. All but two of these plans were eliminated from consideration by the League.*

A 13-month calendar with four quarters of 13 weeks each has consid-

*EDITOR'S NOTE: The League of Nations eliminated the 13-month calendar in 1937, when the Council submitted only The World Calendar to the various nations.

erable merit but the number 13 is considered by many people to be unlucky and it is not readily divisible by two or four. Moreover, some employers seemed to fear that to adopt a 13-month calendar would push up pay rolls, and tenants seemed to fear that it would boost rents by one thirteenth. There was renewed interest in a 13-month calendar in the early 1930's. At that time, while making a talk on the National Farm and Home Hour, I made a facetious remark to the effect that I hoped we would some day have a 13-month calendar. Soon thereafter I began to receive the *Journal of Calendar Reform* which advocates a World Calendar with 12 months. This interesting quarterly journal has been coming to me from The World Calendar Association ever since.

The proposed World Calendar has 12 months and equal quarters. Every year is the same and begins on Sunday. The quarters are divided into three months with 31, 30 and 30 days. Each quarter has 13 weeks and 91 days. Every month has 26 weekdays plus Sundays. Every year has 364 numbered days. The 365th day of each year is designated as Year-End Day or W December and is an extra Saturday. In leap years the 366th day would be Leap-Year Day or W June, an extra Saturday at the end of June. W December and W June would be world holidays.

The proposed World Calendar has many advantages and it has received general approval among scientists. It would afford a particular delight to statisticians who would be relieved of making many adjustments for months and quarters of unequal length.

AN ODDITY

By Thomas Wayling

House of Commons Press Gallery, Ottawa, Canada

AN inscription in Salisbury Cathedral intrigues many people: "The Body of Tho, the sonn of Tho, Lambert, Gent. who was born ye May 13 An.Do.1683 and Dyed Feb. ye 9 the same year."

The explanation is that prior to the Calendar Reform act of 1752 by England and her colonies, the first month of the year was March, so that in 1683 the month of May and the month of February following both came in the same year. Thus September was, as its name implies, the seventh month, November the ninth, December the tenth, January the eleventh and February the twelfth.

CURRENT PRESS COMMENT

Calendar Change Menace to Religion?

Upper Sandusky (Ohio) Chief-Union

7 May 1945

THE mail has brought to the editor's desk a pamphlet published by those who are opposed to any calendar reform, holding any such a change would be a menace to religion. These people are sincerely, no doubt, charging the main aim of any such reform is to destroy the Sabbath and also the seven-day week.

Reforms or changes have always had their opposition. It is interesting to note how strong such opposition always develops. This is most welcome. It makes any new proposal show its merits and gives the public time to meditate. This opposition was far stronger when the present Gregorian calendar was instituted, because it entailed far greater changes, some very radical ones indeed. The changes at present proposed are slight, compared to the change to the Gregorian calendar. In fact the last quarter of 1944 was exactly alike in both, yet no one heard any loud complaints abut it threatening religion. And by the proposed change, every fourth quarter, yes every quarter, would be exactly like that, so it would be easy to reckon dates, and go back to dates in a previous year. Every quarter would start on Sunday.

George Washington's mother's Bible contains the record of the birth of her son George, "Born ye 11th day of February, 1731/32 about 10 in the morning." But we say he was born the 22d of February. The record was in the old style Julian calendar, for, although Pope Gregory had lent his authority to the revised calendar as far back as 1582, the opposition to it was so strong in England where it was loudly denounced as un-Christian, that it was not accepted until 1752. Not only did it change dates 11 days, but New Year's Day was changed from the 25th of March to 1 January, by new style. The old church stuck to 25 March for New Year as it was believed the date of the Annunciation. To change that would be sacrilege of the grossest sort, the old fathers declared in all sincerity. In fact some were not sure the world would stand long if the calendar were changed, and said the old sages, it would "throw confusion into the actual age of people. And people would not worship God on the rightful Sabbath—what a sin."

It took 200 years to get that big change about universally. Earlier calendar reforms were as bitterly fought. . . . Strange the world has stood down through the years with such calendar reforms as our forefathers have accepted. It might be shocking to our readers to learn that the Pilgrim fathers didn't come to America on the date we say they did, Sunday and all the other days of the week were changed with each shift of the calendar so that the day of the week we now celebrate as Sunday isn't the same by any means as that before Caesar's day. And New Year's Day has been changed a long ways, but the world is still going on, notwithstanding it had adopted a number of calendar reforms down through the centuries, and if in some future time it should decide to make the four quarters of the year each to be alike with one month of 31 days and two of 30, and make Easter a fixed date, the second Sunday of April, it is quite probable Mother Earth would not jump out of her orbit, and good people would go to church on Sundays just as they do now, and each week would still have seven days with one being Sunday.

EXCERPTS AND REVIEWS

Calendar Change Menace to Religion

From The Listening Post, *published by the Canadian Federation of Mayors and Municipalities, Montreal, 24 February 1945*

ACCORDING to information received from Mr. A. J. Hills, Canadian representative of The World Calendar Association, in spite of limitations due to the war, the work of advancing proposals for calendar revision has gone steadily forward and progress has been made through the interest of religious, educational, social, business and other organizations.

Mr. Hills points out that with the present calendar there are actually 14 different kinds of years, and it takes a cycle of 28 years for all these varieties to occur. The comparison of one year with another of similar composition cannot take place in less than 6 years, and may extend to 11 or 28 years.

Among the advantages of the arrangement advocated by The World Calendar, are cited the same arrangement of days, weeks and months in every year, resulting in savings of time, money and energy to the general public and to businesses, etc., in the arrangement of vacation periods, civic holidays, general holidays, transportation schedules, the printing of diaries, calendars and other printed forms which would be good for any year, and the like.

To obtain this balance and regularity, The World Calendar Association proposes to make an orderly arrangement of months: first in each quarter, a 31-day month, then two 30-day months, making 91 days, with four such quarters in every year. Year-End Day, 31 December, in a normal year would make 365 days; Leap-Year Day, 31 June, added to a normal year's quota, would make 366 days—183 days in each half-year. At present the first six months in a normal year contain 181 days, the second 184—a difference of three days. . . . No change in the names or number of the present months is contemplated—the proposal suggests merely a re-arranging as above set forth.

Scientist Reviews New Panth Book

By R. NEWTON MAYALL

From Sky and Telescope, *May, 1945*

Consider the Calendar, *by Bhola D. Panth, Teachers College, Columbia University, 1944. 134 pages. $1.25*

THE purpose of this book is to present the historical perspective, pertinent facts, and the two salient alternative solutions relating to the problem of changing the calendar. Based on the thesis that in a democracy it is not only a privilege but the duty of each citizen to study matters relating to the general welfare and then to exercise his or her rights, Dr. Panth clearly and comprehensively outlines the story of the calendar in a simple and readable manner, so that the layman will have no trouble in weighing the facts and analyzing the situation, to the end that good judgment can be made.

That the calendar is no longer the private property of kings, dictators, priests, popes, and pontifices, to satisfy their whims and interest, is clearly set forth. *Consider the Calendar* is a very apt title, and one cannot read the book without realizing the true state of affairs—that the calendar is a vital instrument related to everyday life and it does not hinge on feast-days, holy days, and so on. Dr. Panth points out that the calendar was conceived from the very beginning to serve human needs. Special days can be fitted to any kind of a calendar.

Consider the Calendar is the best treatment since Fotheringham's erudite account in the British *Nautical Almanac* for 1935.

Of particular interest are the various analyses of our present calendar, and a resume of attempts at calendar improvement. The text holds your interest to the end, and it will be a wonder if you don't start trying to lay out a new calendar for yourself, only to give up and settle for The World Calendar.

College Science Club Endorses World Calendar

From the Gazette, *Kalamazoo, Michigan, 31 December 1944*

FOLLOWING the presentation of a carefully prepared summary on calendar revisions, given by William Cain, professor of mathematics at Western Michigan College, the Faculty Science Club of the college has gone on record as in favor of the proposed World Calendar.

"More than 200 calendars have been presented to the League of Nations for its approval. The League rejected all except two—the 13-equal-month calendar, and the 12-month-equal-quarter calendar. The latter is known as The World Calendar, and today it has a much stronger following than the 13-equal-month calendar," Cain says.

"It has about all the merits that calendar reformers ask for—perpetual, balanced, accurate, simple, convenient. It provides for a 364-day year with an extra Year-End Day on 31 December — a double Saturday," he adds.

Cain explains that the 364-day year will give exactly 52 seven-day weeks in the year, and that the added Year-End Day will make the regular year the same as the present year. "These two facts operating together," he says, "will make it perpetual, and still maintain the present length. The present leap year will be maintained, hence the year will remain highly accurate (one-day error in about 3300 years).

"The year is to be divided into quarters of 91 days each. Each quarter will have months of 31, 30 and 30 days length in that order giving the calendar perfect balance. Each month will have exactly 26 weekdays making statistical comparison easier and more understandable. All days of the month will occur on the same day of the week, each and every year.

"Easter can be stabilized if churchmen agree. Easter now shifts over a 35-day period—22 March to 25 April. The leap-year rule would remain as it is with the present Gregorian calendar, but the Leap-Year Day would be placed as a second Saturday, 31 June," he explains.

Londoner Wants New Calendar

From Sunday Despatch, *London, England, 7 November 1943*

REALIZING that much has been said and much more will be said about just what improvements the people of all nations will expect when the hostilities of this war cease, the *Sunday Despatch* of London, England, has inaugurated a feature in which is published the most interesting postwar suggestions submitted by its readers. A prize of five guineas is given for the best and one guinea for each other letter printed. Of interest to readers of the *Journal of Calendar Reform* is the following article by Donald Gates, Boundary Road, Hove, Sussex, and published in the 7 November 1943 issue.

"In our postwar world I want this calendar reform: A year of four quarters of 91 days each, consisting of one 31-day and two 30-day months. If 1 January is arranged to fall on a Sunday, 1 April, 1 July, and 1 October will fall similarly. This gives 364 days. The 365th day would be an extra Saturday following Saturday, 30 December; likewise the additional day in leap year would be an extra Saturday following Saturday, 30 June. Both of these Saturdays would be bank holidays.

"There are many advantages to this calendar. Primarily the calendar would remain absolutely identical from year to year, excepting leap year. Other advantages would be: Each quarter would contain the same number of weekdays. The last day of a quarter falling on a Saturday would benefit business houses. There would be a long week-end at Christmas—Saturday afternoon, Sunday, Monday—without causing any great inconvenience."

FROM THE MAIL BAG

For many years I have been interested in the project of reforming the calendar; and, as you know, I heartily favor The World Calendar.—Dr. C. A. Chant, David Dunlap Observatory, Univ. of Toronto, Richmond Hill, Ont., Canada.

The writer strongly favors The World Calendar.—J. C. Gibson, President, The Pioneer Rubber Co., Willard, O.

These erratic months have plagued us for a long time, and if we can do anything to help along the establishment of The World Calendar do not hesitate to call upon us.—G. S. Wrong, Chief, Transportation and Public Utilities Branch, Dept. of Trade and Commerce, Dominion Bureau of Statistics, Ottawa.

I am familiar with the proposed World Calendar and believe it is the best solution I have ever seen of a difficult problem. I favor its adoption.—Robert E. Wilson, Pres., American Oil Co., N. Y. C.

I subscribe to your movement wholeheartedly. Hope, in my humble way, to forward your cause (our cause) among my associates.—Richard W. Danon, Newswriter, Springfield, O.

The World Calendar movement is making headway. People are just beginning to understand it. It will be like so many movements I have seen; it will come suddenly, when the U. S. A. moves, and then everyone will say it should have been done long ago.—Sir James Barrett, Medical Practitioner, Melbourne, Australia.

The proposed World Calendar is a subject of vital interest to all business men.—John J. Brenner, Kiwanis Club, Ridgewood, N. J.

Every intelligent person must be interested in any device to save time and confusion in human relations. A simplified calendar like simplified language, money, spelling and weights and measures is certainly a step in the right direction. Incidentally, making school calendars—i.e., calendars of the school years—at present is a constant puzzle and nuisance; with the new calendar it would be uniform and universally understood.—Frederick H. Bair, Supt. of Schools, Bronxville, N. Y.

I believe The World Calendar would be a well balanced calendar and very workable.—Mrs. E. H. Gilbertson, Homemaker, Finley, N. D.

I am convinced that such reform is long overdue and, as opportunity offers, I shall not fail to keep in touch with the whole subject.—Rear Admiral Tufton Beamish, C.B., D.L., M.P., Haywards Heath, Sussex, England.

It is my feeling that The World Calendar would eliminate many of our merchandising problems in the retailing field and for that reason particularly I wish to study it as thoroughly as possible.—C. M. Gittinger, Dept. of Retailing, Univ. of S. C., Columbia.

I have been very much interested in your idea of a calendar which is the same each year.—Grace Evans DeKay, Pres., N. Y. State Assoc. of Elementary Principals, Glen Head, L. I.

I have read an item or two on The World Calendar in periodicals and it seems like a much more logical and practical calendar than the present one.—Howard Keller, Mansfield, Ohio.

I am greatly impressed with The World Calendar. I have for a long time been thoroughly disgusted with our present calendar misarrangement.—Robert Karlson, V. P., Reading Anthracite Canadian Co., Ltd., Montreal.

I am very much interested in The World Calendar reform and read your literature carefully.—Dix H. Rowland, Atty., Tacoma, Wash.

For years I have received and eagerly read your *Journal.* I have found many people in full agreement with The World Calendar and waiting for some measures to bring about this desired reform.—The Rev. F. O. Evers, Baltimore, Md.

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Printed in the United States of America by
CHILTON COMPANY, PRINTING DIVISION
New York • Philadelphia